Meng Qu

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Management Science and Information Systems	Phone: (1)-518-253-2869
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RESEARCH INTERESTS

- Data Mining and Knowledge Discovery
- Business Analytics
- Mobile Recommender Systems

EDUCATION

Ph.D. Management Science and Information Systems   2017
Rutgers Business School, Rutgers University
Advisor: Dr. Hui Xiong

M.A. Mathematics   2010
State University of New York - Albany, USA

B.S. Computing Mathematics   2009
City University of Hong Kong, Hong Kong

RESEARCH EXPERIENCE

A Cost-Effective Mobile Recommender System for Taxi Drivers
The 20th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD'14)

- Developed a cost-effective recommender system for taxi drivers
- Provided an entire driving route instead of recommending a sequence of pick-up points.
- Novel recursive strategy based on a special form of the net profit function

Station site optimization in bike sharing systems
2015 IEEE International Conference on Data Mining

- Proposed a bike sharing network optimization approach by considering multiple influential factors.
- Developed a prediction models based on Artificial Neural Networks (ANN) for predicting station demand and balance.
- Built an algorithm based optimization model to choose a set of stations from a large number of candidates in a way such that the station usage is maximized and the number of unbalanced stations is minimized.

Unified Point-of-Interest Recommendation with Temporal Interval Assessment
The 20th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD'16)

- Propose a unified recommender system(WWO) to integrate the user interests and their evolving sequential preferences with temporal interval assessment.
- Develop a low-rank graph construction model to estimate the distribution with sparse observations.
- Evaluate the proposed approach using realworld data set from several location-based social networks(LBSNs).

Knowledge Graph Embedding with Hierarchical Relation Structure
2018 Conference on Empirical Methods in Natural Language Processing

- Developed a three layer hierarchical relation structure in knowledge graphs.
- Extend KGE models TransE, TransH and DistMult to leverage the hierarchical relation structure information.
- Proposed a model make use of the knowledge triples in KGs and the information from the HRS.

Knowledge Graph Embedding with Shared Latent Semantic Units
2021 Neural Networks
- Proposed a general technique that considers latent semantic units in KGE.
- Extend popular KGE models TransE and DistMult with the proposed technique.
- Experiments on popular benchmarks demonstrate the effectiveness of models.

Enhancing Recommender System for Taxi Drivers with Business Effective Strategies

- Developed a recommender system for taxi drivers with virtual stations.
- Provided a dynamic maximum net profit recommendation approach to address the load unbalance problem.

Identification of Prominent Building in Real Estate Market with Multi-task Learning Based Regression

- Build a real estate building recommender by incorporating multiple factors into assessment in a holistic manner.
- Develop a novel multi-task learning based regression model to rank Star Buildings of city regions with different functions.

TEACHING EXPERIENCE
Instructor, Rutgers Business School, NJ, Spring 2012
- Production and Operation Management (29 623 311 01)
- Overall Rating: **4.19/5.00**
- Teaching Effectiveness Rating: **4.13/5.00**

Instructor, Rutgers Business School, NJ, Summer 2013
- Science and Technology Summer Camp - Data Analytics and Information Assuarance

Instructor, Rutgers Business School, NJ, Spring 2015
- Computer Network Applications (29 623 375 01)
- Overall Rating: **4.10/5.00**
- Teaching Effectiveness Rating: **4.21/5.00**

Instructor, Rutgers Business School, NJ, Spring 2016
- Management Information Systems (29 623 220 03)
- Overall Rating: **4.38/5.00**
- Teaching Effectiveness Rating: **4.38/5.00**

Instructor, Rutgers Business School, NJ, Spring 2017
- Management Information Systems (29 623 220 05)
- Overall Rating: **4.30/5.00**
- Teaching Effectiveness Rating: **4.45/5.00**

Instructor, Rutgers Business School, NJ, Spring 2018
- Data Mining (26 198 644 01)
- Overall Rating: **4.67/5.00**
- Teaching Effectiveness Rating: **4.67/5.00**

Instructor, Rutgers Business School, NJ, Fall 2018
- Data Mining (26 198 644 01)
- Overall Rating: **4.21/5.00**
- Teaching Effectiveness Rating: **4.25/5.00**

Instructor, Rutgers Business School, NJ, Fall 2018
- Management Information Systems (29 623 220 03)
- Overall Rating: **4.33/5.00**
- Teaching Effectiveness Rating: **4.44/5.00**

Instructor, Rutgers Business School, NJ, Fall 2018
- Business Data Management (22 198/544 603 30)
- Overall Rating: **4.10/5.00**
- Teaching Effectiveness Rating: **4.30/5.00**

Instructor, Rutgers Business School, NJ, Fall 2018
- Business Data Management (22 198/544 603 31)
- Overall Rating: **4.13/5.00**
- Teaching Effectiveness Rating: **4.00/5.00**

Instructor, Rutgers Business School, NJ, Fall 2019
- Data Mining (26 198 644 01)
- Overall Rating: **4.24/5.00**
- Teaching Effectiveness Rating: **4.18/5.00**

Instructor, Rutgers Business School, NJ, Summer 2020
- Business Research Methods
- Overall Rating: **3.88/5.00**
- Teaching Effectiveness Rating: **4.38/5.00**

Instructor, Rutgers Business School, NJ, Fall 2020
- Business Data Management (22 198/544 603 60)
- Overall Rating: **4.12/5.00**
- Teaching Effectiveness Rating: **4.08/5.00**

Instructor, Rutgers Business School, NJ, Spring 2021
- Business Data Management (22 198/544 603 40)
- Overall Rating: **4.12/5.00**
- Teaching Effectiveness Rating: **4.08/5.00**

Instructor, Rutgers Business School, NJ, Fall 2021
- Business Data Management (22 198/544 603 30)
- Overall Rating: **4.05/5.00**
- Teaching Effectiveness Rating: **4.19/5.00**

Instructor, Rutgers Business School, NJ, Fall 2021
- Data Mining For Business Intelligence (33 136 494 02)
- Overall Rating: **4.00/5.00**
- Teaching Effectiveness Rating: **4.18/5.00**

<u>**AWARDS AND HONORS**</u>
- **Summer Ph.D Research Assistantship**, Rutgers Business School, 2013
- **Full Mainland Scholarship**, City University of Hong Kong, 2005-2009
- **Dean's list**, City University of Hong Kong, 2005

<u>**PROFESSIONAL EXPERIENCE**</u>
Programmer/Internship, Online Services Development Hong Kong Limited, Hong Kong, Summer 2008
- Worked closely with the client to design Web site for investment company, First Alliance, including the record of transactions, financial reports, and advisory commission.
- Prepared graphs, tables, and analytical data visualization.

Academic Secretary, Student Union of Mathematics Department, Hong Kong, 01/2006-01/2007
- Assisted students with coursework.
- Forwarded math questions to students weekly.

Financial Secretary, Sports Tournament, College of Science and Engineering, Hong Kong, 02/2006-05/2006
- Organized team matches, such as football, basketball, volleyball.

<u>**External Review**</u>
- WSDM: Web Search and Data Mining, 2012
- WWW: World Wide Web Conference, 2013
- WSDM: Web Search and Data Mining, 2014
- TKDE: Transactions on Knowledge Discovery from Data, 2016
- IJCAI: International Joint Conferences on Artificial Intelligence, 2018
- AAAI: National Conference on Artificial Intelligence, 2019
- AAAI: National Conference on Artificial Intelligence, 2020
- AAAI: National Conference on Artificial Intelligence, 2021
- Electronic Commerce Research and Applications, 2021
- TKDE: Transactions on Knowledge Discovery from Data, 2021
- AAAI: National Conference on Artificial Intelligence, 2022

<u>**ATTENDED CONFERENCES**</u>
- Rutgers-Stevens Workshop on Optimization of Stochastic Systems, 2011
- The 4th Annual Modeling High Frequency Data in Finance Conference, Stevens Institute Technology, July 2012
- Colloquium on Big Data and Mobile Analytics, November 2013
- SIAM International Conference on Data Mining, April 2014
- ACM SIGKDD Conference on Knowledge Discovery and Data Mining, August 2014
- SIAM International Conference on Data Mining, May 2015

SKILLS

- Proficient in SQL, Python, R, Matlab, Tableau; Knowledgeable in C/C++ and C#
- Fluent in English, Chinese and Cantonese
- Excellent interpersonal communication skills